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SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

under Rule 62a and/or 63 of the European Patent Convention. This report shall be considered, for the purposes of subsequent proceedings, as the European search report

Application number:
EP 21 80 45 76

Classification of the application (IPC):
C08J 9/12*, *C08J 9/18*, *C08J 9/232*, *C08G 71/04*, *C08L 75/04*, *A61K 9/00

Technical fields searched (IPC):
C08G

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X Y	US 7045577 B2 (VIRGINIA TECH INTELL PROP [US]) 16 May 2006 (2006-05-16) * column 1, lines 19-22 * * page 3, line 46 - page 4, line 9 * * page 5, lines 26-59; claims; figures 4, 7; examples *	2, 3, 5-7, 9 4, 8, 10-12, 14, 15
X Y	US 2017218124 A1 (LAUTH MARC [FR] ET AL) 03 August 2017 (2017-08-03) * paragraphs [0001], [0011] - [0027], [0065] - [0067], [0137] - [0140], [0177]; claims; figures 1, 5; examples; tables *	2, 3, 5-7, 9 4, 8, 10-12, 14, 15
X Y	EP 3018163 A1 (BASF SE [DE]) 11 May 2016 (2016-05-11) * paragraphs [0001], [0012] - [0018], [0025], [0048]; claims; examples *	2, 3, 5-7, 9 4, 8, 10-12, 14, 15
X,P	WO 2021067976 A1 (ALGIX LLC [US]) 08 April 2021 (2021-04-08) * paragraphs [0002], [0006] - [0007], [0012], [0044]; claims; figures 1, 2, 3; examples *	2, 3, 5-7, 9, 12

INCOMPLETE SEARCH

The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R. 62a, 63) has been carried out.

Claim(s) completely searchable:2-10

Claim(s) searched incompletely:11, 12, 14, 15

Claim(s) not searched:1, 13

Reason for the limitation of the search:

[0001] 1 Incomplete searchThe subject-matter of claim 1 is unclear to such an extent that is impossible to carry out a meaningful search (Rule 63(1) EPC); the reasons are as follows:Claim 1 defines a non-isocyanate polyurethane (NIPU) of formula I, wherein A and D are end groups selected from a cyclocarbonate and an amine.

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search	Date of completion of the search	Examiner
Munich	19 August 2024	Eigner, Markus

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A: technological background
O: non-written disclosure
P: intermediate document
T: theory or principle underlying the invention
E: earlier patent document, but published on, or after the filing date
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[0002] However, a NIPU of formula I with the required end groups A and D at the claimed positions does chemically not make sense, nor is a chemical reaction known in the art of how to obtain such a NIPU polymer.

[0003] This hold particularly true as group A is directly attached to a group B in formula I, which is selected from and it is presently not clear clear of how to obtain a NIPU with a group A directly attached to said group B.

[0004] Also the description does not provide clarification on what is understood under a NIPU of formula I, nor does it provide any teaching on how to obtain such a NIPU.

[0005] Repeating units of formula I with a group B as as defined result from the ring opening reaction of a cyclic carbonate group with a nucleophile such as a OH- or NH2-group as also indicated in the schemes on page 3 of the description, but the resulting product does not correspond to NIPU of formula I specifically, but only to a NIPU having structurally comparable repeating units.

[0006] Since the NIPU in the concrete examples are obtained via reactions using dimethylcarbonate or a castor oil carbonate, no cyclic carbonate group is introduced into the polymer and as a consequence thereof, none of the exemplified NIPU contains a group B as defined, let alone an specific end group A or D.

[0007] Consequently, none of the exemplified NIPU represents apparently a NIPU of formula I.

[0008] Further uncertainty about the structure of the NIPU of claim 1 results from the fact that the application as a whole focuses on gels from cross-linked networks (e.g. page 1-3 and claims), which demand the presence of a reactant which is at least one tri-functional. In contrast hereto, the NIPU of claim 1 is apparently only difunctional.

[0009] Only the NIPU in examples 5 and 6 are obtained from di-functional starting materials, but the resulting NIPU of examples 5 and 6 do not represent a NIPU of formula I, nor can these NIPU be considered gels in absence of any crosslinking sites.

[0010] 2 Non unityApart from the objection under Rule 63(1) EPC as raised above, the applicant is informed that the application as presently on file lacks unity (Art. 82 EPC).

[0011] As presently understood, the first invention relates to a specific NIPU of formula I (see claims 1, 13 and claims 11, 12, 14 and 15 in parts) and the second invention relates to a gel composition comprising a NIPU in general without any structural limitation of the latter (see claims 2-10 and claims 11, 12, 14 and 15 in parts).

[0012] The reasons for which the inventions are not so linked as to form a single general inventive concept are as follows:The common matter (same or corresponding technical features) of the 2 inventions is the mere presence of a NIPU, which are already known in the art however.

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search	Date of completion of the search	Examiner
Munich	19 August 2024	Eigner, Markus

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[0013] As the common matter is not new, no same special technical feature and no single general inventive concept exists.

[0014] The remaining features over the common matter of the inventions are: Invention I: specific NIPU of formula I with group B as defined (claims 1, 13 and claims 11, 12, 14 and 15 in parts).

[0015] Invention II: a gel composition (claims 2-10 and claims 11, 12, 14 and 15 in parts).

[0016] As outlined above, the application does not contain any concrete example of a NIPU of formula I, nor has it been made credible that its specific structure is associated with an unexpected effect. Thus, the contribution of the specifically claimed NIPU over the art remains entirely unknown.

[0017] Similarly, it has also not been demonstrated that a gel containing a NIPU in general offers any benefit over the art, in particular as neither a comparative example, nor a credible explanation has been provided in this regard.

[0018] Therefore, the remaining features either solve different technical problems or relate both to alternatives only and as a consequence thereof, no corresponding special technical feature exists (R. 44(1) EPC).

[0019] Since there are neither the same nor corresponding special technical features in the claims, there is no single general inventive concept linking the 2 inventions and the requirements of unity as defined in Rule 44 EPC and Art. 82 EPC are not met.

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

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ANNEX TO SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7045577 B2	16-05-2006	US 2004230009 A1 WO 2004074352 A2	18-11-2004 02-09-2004
US 2017218124 A1	03-08-2017	EP 3199569 A1 US 2017218124 A1	02-08-2017 03-08-2017
EP 3018163 A1	11-05-2016	*NONE*	
WO 2021067976 A1	08-04-2021	CA 3157068 A1 EP 4041790 A1 US 2021261772 A1 WO 2021067976 A1	08-04-2021 17-08-2022 26-08-2021 08-04-2021

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